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EXAMINER

CHEVALIER, ALICIA ANN

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1772

6

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-6

**Office Action Summary**

Application No.

09/760,426

Applicant(s)

LEGARE, DAVID J.

Examiner

Alicia Chevalier

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 5,13 and 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-12 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Species A and E, claims 1-4, 5-12 and 14 in Paper No. 5 is acknowledged. It is noted that Applicant believed that claims 18 and 19 also read on the elected species. The examiner disagrees with this conclusion since claims 18 and 19 depend on claim 15 where the wicking agent is calcium oxide or calcium hydroxide. Therefore, since claims 18 and 19 are in combination with claim 15 they are considered part of that species and not the species of claim 7, which claims the species diabasic sodium phosphate.

### ***Specification***

2. The abstract of the disclosure is objected to because it exceeds 150 words. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bjorhang et al. (4,902,445).

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Bjorhang discloses a fiber board which is considerably improved flame resistant comprises a mixture of water glass binder, calcium chloride, and fillers and hydrophobing agents (wicking agent). The water glass composition is composed of a sodium silicate solution with a preferred dry content range 40-60% and the most preferred silicate is sodium water glass in which the ratio of  $\text{SiO}_2$  to  $\text{Na}_2\text{O}$  is in the range of 3.5-1.4. See column 1, line 36 to column 2, line 29.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445).

Kallstrom discloses a fire resistant wall element comprising outer layer phase conversion material, a layer of polyurethane foam, and an inner layer of phase conversion material (figure

1). The phase conversion material can contain sodium silicate water glass and a glauber salt (col. 3, lines 32-41). The outer layer has a thickness of 30 mm (1.2 inch), the intermediate wall has a thickness of 20 mm (0.8 inch), and the inner layer has a thickness of 10 mm (.4 inch) (col. 5, line 64 to col. 6, line 7).

Kallstrom fails to disclose that the outside layer comprises water glass, calcium chloride, and wicking agent.

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Bjorhang discloses a fiber board which is considerably improved flame resistant comprises a mixture of water glass binder, calcium chloride, and fillers and hydrophobing agents (wicking agent). The water glass composition is composed of a sodium silicate solution with a preferred dry content range 40-60% and the most preferred silicate is sodium water glass in which the ratio of  $\text{SiO}_2$  to  $\text{Na}_2\text{O}$  is in the range of 3.5-1.4. See column 1, line 36 to column 2, line 29.

It would have been obvious to one of ordinary skill in the art at the time of the invention to you the composition of Bjorhang as the outer layer of Kallstrom because of its considerably improved flame resistance.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445) as applied to claims 1-4 above, and further in view of Randall (4,037,650).

Kallstrom and Bjorhang disclose all the limitations of the instant claimed invention except that inner layer comprising dibasic and tribasic sodium phosphate and water.

Randall discloses an improved heat resistant composition comprising an aqueous solution of a mixture of trisodium (ortho) phosphate dodecahydrate and disodium hydrogen (ortho) phosphate dodecahydrate (col. 3, line 62 to col. 4, line 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the composition of Randall as the composition of Kallstrom's inner layer because of its improved heat resistance.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorhang et al. (4,902,445) in view of Sugano et al. (4,409,197).

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Bjorhang discloses all the limitations of the instant claimed invention except that the outer wall also comprises dibasic sodium phosphate.

Sugano discloses a sodium carbonate solution with water and at least one salt (abstract) for excellent storage stability. These salts can be a mixture of sodium silicate (water glass), sodium phosphate dibasic, and sodium phosphate tribasic (col. 3, lines 28-39).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add sodium phosphate dibasic to composition of Bjorhang to improve the storage stability.

9. Claim 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorhang et al. (4,902,445) in view of Sugano et al. (4,409,197) as applied to claim 7 above, and further in view of Markusch et al. (3,981,831).

Bjorhang and Sugano disclose all the limitations of the instant claimed invention except that the outer wall also comprises calcium metasilicate and propylene glycol.

Markusch discloses adding propylene glycol and calcium metasilicate to a flame resistant material to improve dimensional stability.

It would have been obvious to one of ordinary skill in the art the time of the invention of add calcium metasilicate and propylene glycol as taught by Markusch to the composition of Bjorhang and Sugano to improve dimensional stability. Selection of parts by weight of the composition is taken as being within the ordinary skill of the art absent unexpected results.

10. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445), Sugano et al. (4,409,197) and Markusch et al. (3,981,831).

Kallstrom discloses a fire resistant wall element comprising outer layer phase conversion material, a layer of polyurethane foam, and an inner layer of phase conversion material (figure 1). The phase conversion material can contain sodium silicate water glass and a glauher salt (col. 3, lines 32-41). The outer layer has a thickness of 30 mm (1.2 inch), the intermediate wall has a thickness of 20 mm (0.8 inch), and the inner layer has a thickness of 10 mm (.4 inch) (col. 5, line 64 to col. 6, line 7).

Kallstrom fails to disclose that the outside layer comprises water glass, calcium chloride, and wicking agent.

Bjorhang discloses a fiber board which is considerably improved flame resistant comprises a mixture of water glass binder, calcium chloride, and fillers and hydrophobing agents (wicking agent). The water glass composition is composed of a sodium silicate solution with a preferred dry content rage 40-60% and the most preferred silicate is sodium water glass in which the ratio of  $\text{SiO}_2$  to  $\text{Na}_2\text{O}$  is in the range of 3.5-1.4. See column 1, line 36 to column 2, line 29.

Sugano discloses a sodium carbonate solution with water and at least on salt (abstract) for excellent storage stability. These salts can be a mixture of sodium silicate (water glass), sodium phosphate dibasic, and sodium phosphate tribasic (col. 3, lines 28-39).

Markusch discloses adding propylene glycol and calcium metasilicate to a flame resistant material to improve dimensional stability.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add sodium phosphate dibasic to composition of Bjorhang to improve the storage stability.

It would have been obvious to one of ordinary skill in the art the time of the invention of add calcium metasilicate and propylene glycol as taught by Markusch to the composition of

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Bjorhang and Sugano to improve dimensional stability. Selection of parts by weight of the composition is taken as being within the ordinary skill of the art absent unexpected results.

It would have been obvious to one of ordinary skill in the art at the time of the invention to you the composition of Bjorhang as the outer layer of Kallstrom because of it's considerably improved flame resistance.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kallstrom (EP0222720A2) in view of Bjorhang et al. (4,902,445), Sugano et al. (4,409,197) and Markusch et al. (3,981,831) as applied to claims 7-12 above, and further in view of Randall (4,037,650).

Kallstrom, Bjorhang, Sugano, and Markusch disclose all the limitations of the instant claimed invention except that inner layer comprising dibasic and tribasic sodium phosphate and water.

Randall discloses an improved heat resistant composition comprising an aqueous solution of a mixture of trisodium (ortho) phosphate dodecahydrate and disodium hydrogen (ortho) phosphate dodecahydrate (col. 3, line 62 to col. 4, line 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the composition of Randall as the composition of Kallstrom's inner layer because of it's improved heat resistance..

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139.



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The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays

If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Harold Pyon can be reached by dialing (703) 308-4251. The fax phone number for the organization official non-final papers is (703) 872-9310. The fax number for after final papers is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0661.

ac

9/28/02



  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER

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